

ESAAB Review

U.S. DEPARTMENT OF ENERGY

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October 16, 2001

Electrical System Modifications – Phase II

Project No. MEL-001-016

Review for CD-3

Approve Start of Construction

Brookhaven Science Associates
U.S. Department of Energy



Objective

- Replace critical sections of the Laboratory's deteriorating underground ductbanks and replace damaged 13.8 kV and 2.4 kV Cable.
- Replace existing 2.4 kV switchgear to increase 2.4 kV system reliability.
- Retrofit and recondition aged 480 V and 13.8 kV power circuit breakers to maintain reliability and safety.

Project Scope

- Second phase of upgrades to old & deteriorating electrical infrastructure. Work scope includes:
 - Installation of new 2.4kV underground cable to replace cable with failed insulation
 - Installation of new 2.4kV switchgear to replace two existing 1950's vintage units
 - Installation of 2 new 13.8kV feeders to replace old deteriorated cable and provide reliable power supply and alternate feed capability
 - Installation of underground duct banks to support new 13.8kV feeder and replace capacity lost to failed duct sections
 - Retrofitting & reconditioning of ten 13.8kV and fifty 480V power circuit breakers to provide reliable and maintainable protection

Critical Decision CD-3 Prerequisites

- Verification of Mission Need (CD-1) May 2000
- Final PEP and Performance Baseline: Approved May 2001
- NEPA Approval: January 2001
- SAR: NA
- IPR Completed: October 2001
- PDS for Construction: April 2001

Project Status for CD-3

■ Schedule:

- Title I Design Complete
- Title II Design 85% Complete
- Construction Start Scheduled 2Q FY02
- Construction Complete Scheduled 4Q FY03

■ Project Funding Profile:

	<u>TEC</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Appropriation	6.770	0.555	3.300	2.915
Obligations	6.770	0.555	3.300	2.915
Costs	6.770	0.450	2.500	3.820

Title II Cost Estimate

WBS COST SUMMARY:

1.0	Electrical System Modifications - Phase II	
1.1	Project Support	<u>Total</u>
1.1.1	Project Management	\$191,000
1.1.2	Project Engineering	610,000
1.1.3	Quality Assurance	130,000
1.2	Construction	
1.2.1	2.4 kV Substation Renov.	1,447,000
1.2.2	13.8 kV Feeder to 901	943,000
1.2.3	2.4 kV Feeder Replacement	1072,000
1.2.4	13.8 kV Feeder to AGS	896,000
1.2.5	Switchgear Refurbishment	764,000
	Contingency	<u>717,000</u>
	Project Total (AY \$)	\$6,770,000

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